

CLAIMS

What is claimed is:

1. A storage medium having an object-oriented program comprising an object having object items to store optional data and a plurality of functions processing the data through the object items, comprising:

    a master class comprising:

        attributes, comprising:

            an item discriminator selectively storing item names of the object items,

            an item type information selectively storing an item type of data to be stored in the object item; and

            address information pointing to a memory address stored with the data;

and

    functions, comprising: a data storing function receiving the item discriminator, the item type and data value, and allowing the object item to store the data.

2. The storage medium having an object-oriented program according to claim 1, wherein the item discriminator includes a string.

3. The storage medium having an object-oriented program according to claim 2, wherein the item type information is expressed as a string, and includes the master class so that a corresponding object item can point to another object item storing at least one data.

4. The storage medium having an object-oriented program according to claim 3, wherein the address information comprises a list of pointers to store one or more data.

5. The storage medium having an object-oriented program according to claim 4, wherein the item discriminator inputted from the data storing function comprises location information of a predetermined data structure, relation between objects formed by allowing the object items in the object to point other object item, and

    wherein the data storing function stores the data in an object item of a position corresponding to the location information.

6. The storage medium having an object-oriented program according to claim 5, wherein a number of layers of the data structure is increased as the object items are increasingly linked, and

wherein the location information of the data structure comprises item discriminators of other object items provided in an upper layer hierarchically linked to an object item to be stored with data, and separators separating the item discriminators of the object items.

7. The storage medium having an object-oriented program according to claim 6, wherein if an object item exists in a position corresponding to the location information in the data structure, the data storing function sets up the item type as an array item type, and additionally stores the data in the object item.

8. The storage medium having an object-oriented program according to claim 7, wherein if an object item positioned in each layer among the location information does not exist in the data structure, the data storing function creates an object having a name of the object item not existing in each layer as an item discriminator, and a master class as an item type.

9. The storage medium having an object-oriented program according to claim 4, wherein the master class further comprises a string conversion function converting data in the object to a string, and the string conversion function converts the object items to a string comprising an item discriminator, an item type, the number of the data, and content of the data.

10. The storage medium having an object-oriented program according to claim 6, wherein the master class further comprises a string conversion function converting data in the object to a string, and the string conversion function converts the object items to a string comprising a item discriminator, an item type, the number of the data, and content of the data.

11. The storage medium having an object-oriented program according to claim 9, wherein the string conversion function is recursively performed as the number of the data when the string converting function confirms that an item type of the object item is a master class.

12. The storage medium having an object-oriented program according to claim 10, wherein the string conversion function is recursively performed as the number of the data when the string conversion function confirms that an item type of the object item is a master class.

13. The storage medium having an object-oriented program according to claim 9, wherein the converted string further includes object item separators between the converted strings corresponding to the respective object items.

14. The storage medium having an object-oriented program according to claim 10, wherein the converted string further includes object item separators between the converted strings corresponding to the respective object items.

15. The storage medium having an object-oriented program according to claim 9, wherein the master class further comprises an object restoring function restoring a string having data in an object to an original object, and the object restoring function restores the string by applying the data storing function to information of each object item separated from the converted string.

16. The storage medium having an object-oriented program according to claim 10, wherein the master class further comprises an object restoring function restoring a string having data in an object to an original object, and the object restoring function restores the string by applying the data storing function to information of each object item separated from the converted string.

17. The storage medium having an object-oriented program according to claim 15, wherein the object restoring function is assigned with memories according to the number of the data in the information of the respective object items separated from the converted string and stores the data sequentially in the memories.

18. The storage medium having an object-oriented program according to claim 16, wherein the object restoring function is assigned with memories according to the number of the data in the information of the respective object items separated from the converted string and stores the data sequentially in the memories.

19. The storage medium of claim 7, wherein the array item type is an integer array or a string array.

20. The storage medium of claim 17, wherein the item discriminator is stored in a message name, wherein the item type is stored in an item type information, and wherein the number of the data is read and a space storing the data is assigned.

21. The storage medium of claim 18, wherein the item discriminator is stored in a message name, wherein the item type is stored in an item type information, and wherein the number of the data is read and a space storing the data is assigned.